Pediatr Radiol (2009) 39:524
DOI 10.1007/s00247-008-1135-z

CLINICAL IMAGE

Proximal humeral epiphysiolysis in a newborn

Ninette van Es · Eline Deurloo

Received: 12 August 2008 / Accepted: 21 December 2008 / Published online: 3 February 2009

A boy weighing 5,450 g was born in a cephalic presentation after 40 weeks' gestation. It was a difficult delivery in which the left arm was forcibly manipulated resulting in shoulder dystocia. On the first day of life the left shoulder was thickened and painful.

A radiograph showed craniolateral displacement of the left humeral metaphysis in relation to the normally positioned ossification centre of the humeral head (Fig. 1). The diagnosis of proximal humeral epiphysiolysis was made. The left arm was bandaged to the chest in the neutral position.

Proximal humeral epiphysiolysis in the newborn can be difficult to identify on plain radiographs, especially with a small and partly ossified epiphysis. US can assist in making the diagnosis [1, 2]. This case shows the enormous remodelling capacity after epiphysiolysis, which is due to the fact that the proximal physis contributes to 80% of the growth of the humerus (Fig. 2).

Fig. 1 Radiograph on day 11

Fig. 2 Radiograph at 6 months

N. van Es
Orthopaedic Department, Academic Medical Center Amsterdam, Amsterdam, The Netherlands

E. Deurloo (✉)
Radiology Department, Academic Medical Center Amsterdam, Meibergdreef 9,
Amsterdam 1105 AZ, The Netherlands
e-mail: e.e.deurloo@amc.uva.nl

References

1. Broker FH, Burbach T (1990) Ultrasonic diagnosis of separation of the proximal humeral epiphysis in the newborn. J Bone Joint Surg Am 72:187–191
2. Van den Broek JA, Vegter J (1988) Diagnosis of a proximal humeral epiphysiolysis in a neonate with the aid of ultrasonography. Ned Tijdschr Geneeskd 132:1015–1017